

REMARKS

In the Office Action mailed December 27, 2005, Claims 27-35 were pending for consideration, all of which were rejected on various statutory grounds. Particularly, Claims 27-35 were rejected under 35 U.S.C. § 112, second paragraph as allegedly indefinite. Claims 27, 28, 31, and 32 were rejected under 35 U.S.C. §§ 102(b) and 103(a) as allegedly anticipated or in the alternative obvious in view of European Patent No. EP 0 570 635 (herein after "Slutz"). Additionally, Claims 29 and 34 were rejected under 35 U.S.C. § 103(a) as allegedly obvious over Slutz. Further, Claims 30 and 33 were rejected under 35 U.S.C. § 103(a) as allegedly obvious over Slutz in view of U.S. Patent No. 5,116,568 (hereinafter "Sung '568"). Additionally, Claims 27-33 were rejected under 35 U.S.C. §§ 102(b) and 103(a) as allegedly anticipated or in the alternative obvious in view of U.S. Patent No. 5,030,276 (hereinafter "Sung '276"). Further, Claim 34 was rejected under 35 U.S.C. § 103(a) as allegedly obvious over Sung '276. Finally, Claim 35 was rejected under 35 U.S.C. § 103(a) as allegedly obvious over Sung '276 as applied to Claim 34, and further in view of U.S. Patent No. 6,039,641 (hereinafter "Sung '641").

By the present amendment, Claims 27-29, 31 and 33 have been amended. Specifically, Claim 27 has been rewritten in a manner suggested by the Examiner during the interview. Support for this amendment can be found, *inter alia*, on page 11, lines 27-30; page 13, lines 7-9; page 14, lines 6-8; and Claim 27 prior to amendment. Claims 28 and 29 have been amended to reflect the language of the amendment to Claim 27. Claim 31 has been amended to correct a claim dependency issue where Claim 31 depended from itself. Finally, Claim 33 has been amended to delete the term "substantially."

Applicant respectfully submits that no new matter is introduced by the present amendment. Further, it is to be noted that such amendments are made solely for the purposes of

expediting prosecution of the present case, without conceding to the Examiner's arguments, and without prejudice to Applicant's right to pursue canceled or relinquished subject matter in a future patent application. As a result of the present amendment, Claims 27-35 remain pending for consideration, and reconsideration thereof in view of the following remarks is respectfully requested.

Objection to the Disclosure

The Examiner objected to the disclosure of the present application because the application serial number of an incorporated reference had not been updated on page 16, lines 21-22. The specification has been amended to update this information. Reconsideration is respectfully requested.

Rejection Under 35 U.S.C. § 112, second paragraph

Claims 27-35 were rejected as allegedly indefinite. Applicant respectfully submits that the present amendment addresses the concerns raised by the Examiner and renders this rejection moot. Accordingly, Applicant requests that the rejection be withdrawn.

Rejection under 35 U.S.C. § 102(b)

Claims 27-28 and 31-32 were rejected as allegedly anticipated over of Slutz, and Claims 27-33 were rejected as allegedly anticipated over Sung '276.

The Slutz reference:

The Slutz reference teaches coating granules of cubic boron nitride with an active coating material and sintering the coated particles with or without a powdered metal alloy (abstract). The active coating material is applied by CVD, electrolytic, and electroless deposition (col. 4, lines 24-47). The granules are then sintered, with or without metal powder (abstract, col. 6, lines 43-54).

Amended Claim 27 requires that each superabrasive particle be coated with a molten braze alloy, and that the particles are metallurgically bonded together with the braze alloy. The Slutz reference does not teach or suggest coating superabrasive particles with a molten braze alloy. Additionally, the granules of Slutz are not bonded together with a braze alloy, but rather are sintered together. As such, the Applicant respectfully asserts that Slutz does not teach or suggest each and every element of Claim 27.

The Sung '276 reference:

Sung '276 teaches a temperature stable polycrystalline diamond (TSPCD) element coated with a carbide forming metal and bonded to a matrix. A TSPCD element is composed of an aggregate of diamond particles being bonded by diamond-diamond bonds (col. 1, lines 43-45; col. 8, lines 11-15). These elements are coated with a metal by CVD or fused salt bath coating methods (col. 9, lines 8-13). Hard ceramic particles are then mixed with the TSPCD elements and infiltrated with a copper or nickel based brazing alloy.

Amended Claim 27 contains a limitation that each superabrasive particle be coated with the molten braze alloy and that the superabrasive particles are bonded together with the braze alloy. As was discussed in the interview, the granules making up the TSPCD elements of Sung '276 are not bonded together by a braze alloy as required by Claims 27, but rather are bonded together by diamond-diamond bonds formed during sintering of the TSPCD element. In order to clarify this issue, an affidavit is hereby included as Exhibit 1 from the first named inventor of Sung '276. It should be noted that this inventor is also the present Applicant. Accordingly, Sung '276 does not teach each and every element of Claim 27.

As Claims 28-33 depend from Claim 27 and are thus considered to be narrower in scope, they will not be discussed in detail. Because the Slutz and Sung '276 references do not teach or

suggest each and every element of Claim 27, the Applicant respectfully requests that the § 102 rejections of Claims 27-33 be withdrawn.

Rejection Under 35 U.S.C. § 103(a)

Claims 27-29, 31-32, and 34 were rejected as allegedly obvious in view of Slutz, Claims 30 and 33 were rejected as allegedly obvious over Slutz in view of Sung '568, Claims 27-33 were rejected as allegedly obvious over Sung '276, Claim 34 was rejected as allegedly obvious over Sung '276, and Claim 35 was rejected as allegedly obvious over Sung '276 as applied to Claim 34, and further in view of Sung '641.

Before discussing the § 103 rejections, it is thought proper to briefly state what is required to sustain such a rejection. The issue under § 103 is whether the PTO has stated a case of *prima facie* obviousness. "The PTO has the burden under § 103 to establish a *prima facie* case of obviousness." In re Fine, 837 F.2d 1071, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988). To satisfy this burden, the PTO must meet the criteria set out in M.P.E.P § 706.02(j):

. . . three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991).

With the above background in mind, the rejections under 35 U.S.C. § 103 will be discussed.

The Slutz reference:

As has been discussed above, Slutz does not teach or suggest coating superabrasive particles with a molten braze alloy, and the granules of Slutz are bonded together by sintering. Slutz does not teach or suggest, either explicitly or by obvious modification, the coating and

bonding together of individual superabrasive particles with a molten braze alloy. Accordingly, a *prima facie* of obviousness case has not been established by the Examiner. Additionally, Claims 28-30 and 32-34 will not be discussed in detail as they depend from Claim 27 and are thus narrower in scope. Regarding the rejection of Claims 30 and 33 over the combination of Slutz and Sung '568, there is no teaching or suggestion by this combination of references of the limitations of independent Claim 27, namely that superabrasive particles be coated and bonded together with a molten braze alloy.

The Sung '276 reference:

Also as has been discussed above, the granules making up the TSPCD elements of Sung '276 are not bonded together by a braze alloy as required by Claims 27, but rather are bonded together by diamond-diamond bonds formed during sintering of the TSPCD element. It would also not be obvious to one of ordinary skill in the art to modify Sung '276 to arrive at individually coated superabrasive particles bonded together with a braze alloy. In fact, such a teaching is entirely contrary to the process of the present invention which recites a braze alloy coating around the particles. Accordingly, a *prima facie* of obviousness case has not been established by the Examiner. Additionally, Claims 28-34 will not be discussed in detail as they depend from Claim 27 and are thus narrower in scope. Regarding the rejection of Claim 35 over the combination of Sung '276 and Sung '641, there is no teaching or suggestion by this combination of references of the limitations of independent Claim 27, namely that superabrasive particles be coated and bonded together with a molten braze alloy.

Because a *prima facie* case of obviousness has not been established by the Examiner, the Applicant respectfully requests that the § 103 rejections of Claims 27-35 be withdrawn.

CONCLUSION

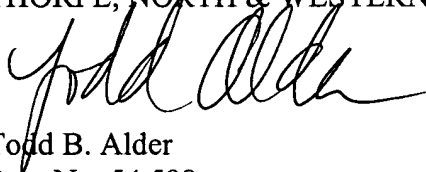
In view of the foregoing, the Applicants believe that Claims 27-35 present allowable subject matter and allowance thereof is respectfully requested. If any impediment to the allowance of these claims remains after consideration of the present amendment and the above remarks, and such impediment could be removed during a telephone interview, the Examiner is invited to telephone the undersigned attorney so that such issues may be resolved as expeditiously as possible.

Please charge any additional fees except for Issue Fee or credit any overpayment to Deposit Account No. 20-0100.

Dated this 27th day of April, 2006.

Respectfully submitted,

THORPE, NORTH & WESTERN, LLP

A handwritten signature in black ink, appearing to read "Todd B. Alder", written over the printed name.

Todd B. Alder
Reg. No. 54,598
8180 South 700 East, Suite 200
Sandy, UT 84070
Telephone: (801) 566-6633
Facsimile: (801) 566-0750

DWO/TBA/js